

What is claimed is:

1. A mobile communications device comprising:
a non-directional antenna;
a directional antenna;
a transmitter/receiver section;
a switch for switching states of connection between the non-directional and directional antennas and the transmitter/receiver section; and
a control circuit for controlling the switch.
2. A mobile communications device as claimed in claim 1,
wherein the control circuit controls the switch according to how the mobile communications device is being used.
3. A mobile communications device as claimed in claim 1,
wherein the control circuit controls the switch according to strength of a signal being received by the transmitter/receiver section.
4. A mobile communications device as claimed in claim 1,
wherein the control circuit controls the switch according to how the mobile communications device is being used and according to strength of a signal being received by the transmitter/receiver section.
5. A mobile communications device as claimed in claim 1,
wherein the mobile communications device is a cellular telephone device.

6. A mobile communications device as claimed in claim 5,
wherein the control circuit controls the switch according to how the mobile communications device is being used.

7. A mobile communications device as claimed in claim 6,
wherein, when operation other than voice communication is being performed, the switch connects the non-directional antenna to the transmitter/receiver section and, when voice communication is being performed, the switch connects the directional antenna to the transmitter/receiver section.

8. A mobile communications device as claimed in claim 6,
wherein the mobile communications device is a cellular telephone device having a body,

wherein the mobile communications device further comprises a loudspeaker for outputting sound and a touch sensor provided in a portion in the body where the loudspeaker is arranged, and

wherein, when the touch sensor is sensing touch, the switch connects the directional antenna to the transmitter/receiver section and, when the touch sensor is not sensing touch, the switch connects the non-directional antenna to the transmitter/receiver section.

9. A mobile communications device as claimed in claim 5,
wherein the control circuit controls the switch according to strength of a signal being received by the transmitter/receiver section.

10. A mobile communications device as claimed in claim 5,

wherein the control circuit controls the switch according to how the mobile communications device is being used and according to strength of a signal being received by the transmitter/receiver section.

11. A mobile communications device as claimed in claim 10,

wherein, when operation other than voice communication is being performed or the strength of the signal being received is lower than a predetermined level, the switch connects the non-directional antenna to the transmitter/receiver section and, when voice communication is being performed and in addition the strength of the signal being received is higher than or equal to the predetermined level, the switch connects the directional antenna to the transmitter/receiver section.

12. A mobile communications device as claimed in claim 10,

wherein the mobile communications device is a cellular telephone device having a body,

wherein the mobile communications device further comprises a loudspeaker for outputting sound and a touch sensor provided in a portion in the body where the loudspeaker is arranged, and

wherein, when the touch sensor is sensing touch and in addition the strength of the signal being received is higher than or equal to a predetermined level, the switch connects the directional antenna to the transmitter/receiver section and, when the touch sensor is not sensing touch or the strength of the signal being received is lower than the predetermined



Figure 1. The effect of the concentration of the *Agrobacterium* strain on the transformation efficiency of *Agrobacterium* strain 1024. The *Agrobacterium* strain 1024 was cultured in YEA medium for 24 h at 28 °C. The cell concentration was adjusted to 1.0 × 10⁸ cells/ml. The cell suspension was mixed with the cell suspension of the *Agrobacterium* strain 1024 at a ratio of 1:1, 1:2, 1:3, 1:4, 1:5, 1:6, 1:7, 1:8, 1:9, 1:10, 1:11, 1:12, 1:13, 1:14, 1:15, 1:16, 1:17, 1:18, 1:19, 1:20, 1:21, 1:22, 1:23, 1:24, 1:25, 1:26, 1:27, 1:28, 1:29, 1:30, 1:31, 1:32, 1:33, 1:34, 1:35, 1:36, 1:37, 1:38, 1:39, 1:40, 1:41, 1:42, 1:43, 1:44, 1:45, 1:46, 1:47, 1:48, 1:49, 1:50, 1:51, 1:52, 1:53, 1:54, 1:55, 1:56, 1:57, 1:58, 1:59, 1:60, 1:61, 1:62, 1:63, 1:64, 1:65, 1:66, 1:67, 1:68, 1:69, 1:70, 1:71, 1:72, 1:73, 1:74, 1:75, 1:76, 1:77, 1:78, 1:79, 1:80, 1:81, 1:82, 1:83, 1:84, 1:85, 1:86, 1:87, 1:88, 1:89, 1:90, 1:91, 1:92, 1:93, 1:94, 1:95, 1:96, 1:97, 1:98, 1:99, 1:100, 1:101, 1:102, 1:103, 1:104, 1:105, 1:106, 1:107, 1:108, 1:109, 1:110, 1:111, 1:112, 1:113, 1:114, 1:115, 1:116, 1:117, 1:118, 1:119, 1:120, 1:121, 1:122, 1:123, 1:124, 1:125, 1:126, 1:127, 1:128, 1:129, 1:130, 1:131, 1:132, 1:133, 1:134, 1:135, 1:136, 1:137, 1:138, 1:139, 1:140, 1:141, 1:142, 1:143, 1:144, 1:145, 1:146, 1:147, 1:148, 1:149, 1:150, 1:151, 1:152, 1:153, 1:154, 1:155, 1:156, 1:157, 1:158, 1:159, 1:160, 1:161, 1:162, 1:163, 1:164, 1:165, 1:166, 1:167, 1:168, 1:169, 1:170, 1:171, 1:172, 1:173, 1:174, 1:175, 1:176, 1:177, 1:178, 1:179, 1:180, 1:181, 1:182, 1:183, 1:184, 1:185, 1:186, 1:187, 1:188, 1:189, 1:190, 1:191, 1:192, 1:193, 1:194, 1:195, 1:196, 1:197, 1:198, 1:199, 1:200, 1:201, 1:202, 1:203, 1:204, 1:205, 1:206, 1:207, 1:208, 1:209, 1:210, 1:211, 1:212, 1:213, 1:214, 1:215, 1:216, 1:217, 1:218, 1:219, 1:220, 1:221, 1:222, 1:223, 1:224, 1:225, 1:226, 1:227, 1:228, 1:229, 1:230, 1:231, 1:232, 1:233, 1:234, 1:235, 1:236, 1:237, 1:238, 1:239, 1:240, 1:241, 1:242, 1:243, 1:244, 1:245, 1:246, 1:247, 1:248, 1:249, 1:250, 1:251, 1:252, 1:253, 1:254, 1:255, 1:256, 1:257, 1:258, 1:259, 1:260, 1:261, 1:262, 1:263, 1:264, 1:265, 1:266, 1:267, 1:268, 1:269, 1:270, 1:271, 1:272, 1:273, 1:274, 1:275, 1:276, 1:277, 1:278, 1:279, 1:280, 1:281, 1:282, 1:283, 1:284, 1:285, 1:286, 1:287, 1:288, 1:289, 1:290, 1:291, 1:292, 1:293, 1:294, 1:295, 1:296, 1:297, 1:298, 1:299, 1:300, 1:301, 1:302, 1:303, 1:304, 1:305, 1:306, 1:307, 1:308, 1:309, 1:310, 1:311, 1:312, 1:313, 1:314, 1:315, 1:316, 1:317, 1:318, 1:319, 1:320, 1:321, 1:322, 1:323, 1:324, 1:325, 1:326, 1:327, 1:328, 1:329, 1:330, 1:331, 1:332, 1:333, 1:334, 1:335, 1:336, 1:337, 1:338, 1:339, 1:340, 1:341, 1:342, 1:343, 1:344, 1:345, 1:346, 1:347, 1:348, 1:349, 1:350, 1:351, 1:352, 1:353, 1:354, 1:355, 1:356, 1:357, 1:358, 1:359, 1:360, 1:361, 1:362, 1:363, 1:364, 1:365, 1:366, 1:367, 1:368, 1:369, 1:370, 1:371, 1:372, 1:373, 1:374, 1:375, 1:376, 1:377, 1:378, 1:379, 1:380, 1:381, 1:382, 1:383, 1:384, 1:385, 1:386, 1:387, 1:388, 1:389, 1:390, 1:391, 1:392, 1:393, 1:394, 1:395, 1:396, 1:397, 1:398, 1:399, 1:400, 1:401, 1:402, 1:403, 1:404, 1:405, 1:406, 1:407, 1:408, 1:409, 1:410, 1:411, 1:412, 1:413, 1:414, 1:415, 1:416, 1:417, 1:418, 1:419, 1:420, 1:421, 1:422, 1:423, 1:424, 1:425, 1:426, 1:427, 1:428, 1:429, 1:430, 1:431, 1:432, 1:433, 1:434, 1:435, 1:436, 1:437, 1:438, 1:439, 1:440, 1:441, 1:442, 1:443, 1:444, 1:445, 1:446, 1:447, 1:448, 1:449, 1:450, 1:451, 1:452, 1:453, 1:454, 1:455, 1:456, 1:457, 1:458, 1:459, 1:460, 1:461, 1:462, 1:463, 1:464, 1:465, 1:466, 1:467, 1:468, 1:469, 1:470, 1:471, 1:472, 1:473, 1:474, 1:475, 1:476, 1:477, 1:478, 1:479, 1:480, 1:481, 1:482, 1:483, 1:484, 1:485, 1:486, 1:487, 1:488, 1:489, 1:490, 1:491, 1:492, 1:493, 1:494, 1:495, 1:496, 1:497, 1:498, 1:499, 1:500, 1:501, 1:502, 1:503, 1:504, 1:505, 1:506, 1:507, 1:508, 1:509, 1:510, 1:511, 1:512, 1:513, 1:514, 1:515, 1:516, 1:517, 1:518, 1:519, 1:520, 1:521, 1:522, 1:523, 1:524, 1:525, 1:526, 1:527, 1:528, 1:529, 1:530, 1:531, 1:532, 1:533, 1:534, 1:535, 1:536, 1:537, 1:538, 1:539, 1:540, 1:541, 1:542, 1:543, 1:544, 1:545, 1:546, 1:547, 1:548, 1:549, 1:550, 1:551, 1:552, 1:553, 1:554, 1:555, 1:556, 1:557, 1:558, 1:559, 1:560, 1:561, 1:562, 1:563, 1:564, 1:565, 1:566, 1:567, 1:568, 1:569, 1:570, 1:571, 1:572, 1:573, 1:574, 1:575, 1:576, 1:577, 1:578, 1:579, 1:580, 1:581,